

XII.—*Exotic Muscaridae (Diptera)*.—VI.*

By J. R. MALLOCH, Washington, D.C.

Subfamily *PHAONINÆ*.Genus *MYIOSPILA*, R.-D.*Myiospila mediatubunda*, var. *angustifrons*, n.

Male and female.—Similar to the typical form, differing in having the thorax of male darker, indistinctly vittate, the abdomen with much darker prumescence and the paired spots larger and less clearly differentiated in male, and much more conspicuous in female. The frons of the male is much narrower in this variety than in the typical form, at the narrowest point being not wider than the distance between the posterior ocelli.

Length 7.5–8 mm.

Type and allotype, Gulmarg, Kashmir, 8500 feet, summer, 1913 (F. W. Thomson).

Genus *SPILARIA*, S. & D.*Spilaria cashmirensis*, sp. n.

Male and female.—Black, marked as in *lucorum*, Meigen, the thorax quadrivittate and the abdomen with paired spots and lateral checkerings on dorsum. The dorsal spots are less clearly defined and the cross-veins of wings are not perceptibly darkened.

Male.—Eyes hairy, more narrowly separated than in *lucorum*, the narrowest point about as wide as anterior ocellus; frontal bristles not extending to middle of orbits; parafacial a little narrower than in *lucorum*. Thorax as in that species, the hairs on hypopleura less numerous, sometimes absent, those on ventral surface of scutellum more numerous. Abdomen ovate, basal sternite bare. Fore tibia with a strong median posterior bristle; fore tarsus slender; mid-femur with some strong bristles on basal half of postero-ventral surface and some weaker bristles on basal half of antero-ventral; mid-tibia with three strong posterior bristles; hind femur with a rather densely placed series of antero-ventral bristles, the postero-ventral surface with a few short hairs apically; hind tibia with two antero-dorsal and eight or

* For Part V., see Ann. & Mag. Nat. Hist. (9) ix., March 1922, pp. 271–280.

more antero-ventral bristles, the posterior surface with a series of long setulae on median half. Venation as in *lucorum*.

Female.—Similar to the male, the frons one-third of the head-width.

Length 7–8 mm.

Type, male, allotype, and one female paratype, Gulmarg, Kashmir, 8500 feet, summer, 1913 (*F. W. Thomson*).

Spilaria fuscopicta, sp. n.

Female.—Black, densely grey-pruinose. Antennae and palpi black. Thorax with four brownish-black vitta anteriorly and a poorly defined central vitta posteriorly. Dorsum of abdomen with two pairs of large fuscous spots, one on second and the other on third tergite, and also with a faint central line and lateral checkerings blackish. Legs rufous, apices of femora narrowly blackened above, tarsi black, tibiae a little infuscated at bases above. Wings clear, both cross-veins broadly blackish. Calyptrae whitish. Halteres yellow.

Eyes hairy, head normal. Thorax with four pairs of postsutural dorso-centrals; prealar very short, but strong; scutellum and hypopleura as in *lucorum*; sterno-pleurals 2:2. Abdomen elongate-ovate, apical bristles on fourth tergite (5th) much weaker than those at middle. Fore tibia with a median bristle; mid-femur with three or four bristles on basal half of postero-ventral surface; hind femur with a series of long antero-ventral bristles, and some short bristles on basal half of postero-ventral surface; hind tibia with two or three antero-dorsal and three or four antero-ventral bristles, and one or two short setulae near base on postero-dorsal surface. Outer cross-vein nearly straight; veins 3 and 4 divergent apically.

Length 8–9 mm.

Type and paratype, Kabete, Kenya Colony, 28. viii. 1914, on window (*T. J. Anderson*).

This species closely resembles *Mydrea quadruplex*, Stein, and *M. hirticeps*, Stein (= *mollis*, Stein), but both of these have three pairs of postsutural dorso-central bristles and differ otherwise, though Stein describes the female of the latter as having four pairs. There may be some error in his identification, as there are several closely related species.

Genus *Idiorhynchus*, Malloch.

I have only recently obtained access to a copy of Stein's paper on the Diptera collected by Alluaud and Jeannel in East Africa, and find that his *Mydrea trochanterata* belongs to

Idiopygus. This necessitates a change of name for *Idiopygus trochanteratus*, Malloch, described in Part III. of this series of papers. I therefore propose to substitute the name *uhundi* for the species.

Stein's species is very closely allied to mine, but whether or not it is the same, or is *hirtiventris*, Malloch, it is impossible to say without a careful examination of the type, which was, according to Stein, in poor condition. The legs of both my species are black, while in *trochanteratus*, Stein, the tibiæ are slightly reddish.

Stein's species came from Kilimandjaro, German East Africa, the others are also from East Africa. I have seen no species of the genus from the western part of that continent.

Eulimnophora trimaculata (Stein).

I have before me a male of this very striking species from the top of the Aberdare Mts., 9500 feet, 28. ii. 1911 (*T. J. Anderson*).

The fourth vein of the wing is very noticeably curved forward apically, the thorax has three black spots on the anterior margin, contiguous in front, only the median one extending to suture, and there are three contiguous black spots behind the suture; the sides of the abdominal tergites 1 and 2 are broadly yellowish, and the large subtriangular black spots form two almost entire submedian vittæ on the abdomen.

A slightly aberrant species, but quite evidently belonging to this genus.

GENUS RHYNCHOMYDÆA, nov.

Generic characters.—Similar to *Cyrtoneura* in general habitus. Eyes of male subcontiguous, of female separated by a little less than one-third of the head-width, bare in both sexes; orbits of male with very fine short hairs, of female with bristles as in *Helina*, but only the upper one directed backward; arista long-plumose; face with a very conspicuous rounded ridge vertically in middle or tuberculate. Thorax with the dorso-centrals, except the posterior two pairs, very short, pteropleura hairy, prosternum hairy, hairs descending on sides of scutellum. Third wing-vein setulose at base, fourth curved forward apically.

Genotype, *Mydæa tuberculifacies*, Stein.

Rhynchomyda tuberculifacies (Stein).

Originally described from Batavia. I have before me three specimens from Ceylon (Yerbury).

Rhynchomyda australis, sp. n.

Female.—Differs from the genotype in having the thorax entirely yellow and the abdomen of the same colour, with a more or less distinct infuscation dorsally; the metanotum has a pair of blackish spots. Antennae and palpi yellow. Legs tawny, tarsi fuscous. Wings yellowish, veins yellow.

Arista with shorter hairs than in genotype, the upper series duplicated only at base instead of on almost the entire length. Thorax as in genotype. Fore tibia without a median bristle; mid-tibia with two posterior bristles; hind femur with a few bristles on apical half of antero-ventral surface; hind tibia with one antero-dorsal and one antero-ventral bristle. Third wing-vein setulose from base almost midway to inner cross-vein; first posterior cell not so much narrowed as in genotype.

Length 5–6 mm.

Type, Burpengary, South Queensland; three female paratypes, Queensland (*T. L. Bancroft*).

This is one of the most distinctive genera in the complex group listed under the generic name *Mydaa* by Stein. No other genus has the peculiar facial ridge. The genus *Mydaa* is found only in the Palearctic and Nearctic regions so far as I have seen. *Mydaa carinata*, Stein, from Mt. Victoria, probably belongs here; it is unknown to me.

Australian *Helinae*.

For the convenience of students of this family I am presenting a key to the Australian species of *Helina* in the material before me at this time. It may be possible to increase the synopsis on some future occasion:—

1. Thorax and abdomen blue; knobs of halteres and legs black; eyes densely hairy; arista with long sparse hairs; cross-veins of wings not infuscated 2.
- Thorax and abdomen not blue, sometimes with a cupreous or bronzy tinge, if it is slightly greenish the legs are tawny; other characters not as above 4.
2. Calyptæ without fuscous margins; post-sutural dorso-centrals 3; species averaging about 6 mm. in length. *cærulescens*, Stein.
- Calyptæ without fuscous margins; post-sutural dorso-centrals 4 *regina*, sp. n.
- Calyptæ with fuscous margins. 3.

3. Large species, 8-9 mm. in length; postsutural dorso-centrals 4; thorax and abdomen both with conspicuous pruinescence, the former distinctly vittate, the latter with a blackish dorso-central vitta *whitei*, sp. n.
- Small species, 4 mm. in length; thorax with faint pruinescence and very faintly vittate; abdomen not pruinescent *tasmaniensis*, sp. n.
4. Thorax testaceous yellow, with three broad brownish-red vittæ which become fuscous posteriorly, the median one continued over disc of scutellum; pleura with a fuscous streak on upper margin from humeri to base of wing..... *fusciflava*, Malloch.
- Thorax entirely or almost entirely black... 4a.
- 4a. Halteres and legs black; thorax with three broad shining black vittæ; abdomen with iridescent checkerings, bronzy with greyish pruinescence, the apical margins of the tergites violet-coloured in some lights; frons of male about one-fourth of the head-width; eyes very inconspicuously hairy; arista long-plumose; wings with a brown spot at apex of auxiliary vein, one over inner cross-vein, and another on each end of outer cross-vein *iridescens*, sp. n.
- Halteres pale; other characters not as above. 5.
5. Thorax with four pairs of postsutural dorso-central bristles 6.
- Thorax with three pairs of postsutural dorso-central bristles..... 9.
6. Longest hairs of arista longer than width of third antennal segment; legs tawny, tarsi fuscous; cross-veins not clouded; fore tibia without bristle at middle of posterior surface *antarctica*, Bigot.
- Longest hairs on arista much shorter than width of third antennal segment; at least part of the femora in addition to tarsi infuscated; inner cross-vein and sometimes also the outer one distinctly clouded; fore tibia with a median posterior bristle..... 7.
7. Legs black; hind tibia of male with a series of very long bristles on antero-ventral and another series on posterior surface; prealar bristle short, but distinct *pæciliventris*, sp. n.
- At least the tibiae tawny; hind tibia of male with from two to four short antero-ventral bristles and no series such as above..... 8.
8. Prealar bristle short, but distinct; almost entirely black; fifth abdominal sternite with normal hairing *addita*, Walker.
- Prealar bristle indistinguishable from the adjoining hairs; mid and hind femora with their apical fifth tawny; fifth abdominal sternite with dense erect fine hairs, which are longer than usual *piliventris*, sp. n.

9. Wing with a fuscous spot close against third vein just beyond outer cross-vein; both cross-veins broadly clouded *trindulifera*, sp. n.
 Wing without a spot in first posterior cell as above, cross-veins clouded or unclouded. 10.
10. Cross-veins of wings distinctly clouded; longest hairs on arista much shorter than width of third antennal segment; fore tibia with a median posterior bristle *victoria*, sp. n.
 Cross-veins of wings not infuscated; longest hairs on arista at least as long as width of third antennal segment 11.
11. Bristles on antero-ventral surface of hind femur extending from base to apex; neither the posterior median bristle on fore tibia nor the posterior median setula on hind tibia present; thorax without strong presutural acrostichal bristles *micans*, sp. n.
 Bristles on antero-ventral surface of hind femur confined to the apical half, if on almost entire surface, the fore tibia has a median bristle 12.
12. Fore tibia with a median posterior bristle; hind femur with an almost complete series of antero-ventral bristles; thorax with a very short pair of presutural acrostichal bristles; hind tibia without a posterior setula near middle *spilariformis*, sp. n.
 Fore tibia without a median posterior bristle. 13.
13. Thorax without a strong pair of presutural acrostichal bristles; abdomen without brassy or violaceous reflections; hind tibia without any setula near middle on posterior surface *achata*, sp. n.
 Thorax with a pair of long presutural acrostichal bristles; abdomen with brassy or violaceous reflections; hind tibia with one or more weak setulae on posterior surface near middle *aneiventris*, sp. n.

Helina caerulescens (Stein).

Two male specimens of this species from Mangalore, Tasmania, 24. x. 1911 and 16. iii. 1913 (*A. White*).

The characters listed in the foregoing key will serve to distinguish this species from the next two, with which it forms a group that differs from any in the genus known to me from any part of the world. The general habitus of the forms is very similar to that of small *Calliphorinae*, but no reliable characters are present that appear to justify their separation from other *Helinae*.

Helina whitei, sp. n.

Male and female.—The largest of the three species and quite robust. Colours as stated in key, the thorax very conspicuously vittate. Wings hyaline.

Male.—Narrowest part of frons nearly as wide as third antennal segment; orbits setulose on their entire length; arista plumose; vibrissal angle not much produced; facial ridges haired more than midway to base of antennæ. Thorax without presutural acrostichals; prealar short. Fore tibia unarmed at middle; mid-tibia with three or four posterior bristles; hind femur with a complete series of short antero-ventral bristles, the postero-ventral surface with a few short setulose hairs; hind tibia with three or four short antero-dorsal bristles. Outer cross-vein oblique and much curved.

Female.—Frons about one-third of the head-width; hind femur with bristles on antero-ventral surface confined to apical half; hind tibia with one antero-ventral bristle. Otherwise as male. Genitalia normal.

Length 8-9 mm.

Type, male, Healesville, Victoria, 13. xii. 1914; allotype, Mangalore, Tasmania, 22. ii. 1913 (*A. White*).

Named in honour of the collector.

Helina tasmaniensis, sp. n.

Male.—A deep blue species, with greenish vitta lateral to the dorso-centrals on each side of thorax, and the abdomen with a greenish tinge posteriorly, the pruinescence almost absent.

Narrowest part of frons not wider than third antennal segment; parafacials linear, much narrower than in *whitei*. Fore tibia as in that species; mid-tibia with two posterior bristles; hind tibia with about three antero-dorsal and three antero-ventral bristles. Outer cross-vein not so oblique or curved as in *whitei*.

Length 4 mm.

Type, Mangalore, Tasmania, 20. iv. 1913 (*A. White*).

Helina regina, sp. n.

Male and female.—Black, with a distinct blue tinge, the abdomen almost entirely blue, with whitish pruinescence in checkerings as in many *Calliphorinæ*. Head black, cheeks more or less rufous brown, orbits silvery. Thorax quadri-vittate. Legs black. Wings hyaline. Calyptre white. Halteres with black knobs.

Male.—Eyes rather sparsely haired; frons at narrowest part about twice as wide as third antennal segment; orbits narrow, with bristles on their entire length; parafacial about as wide as third antennal segment; facial ridges haired midway to base of antenna; arista plumose. Presutural

acrostichals setulose, but no pair well differentiated; prealar minute or absent; postsutural dorso-centrals 4; sternopleurals 1:2; scutellum not haired on sides or venter. Abdomen ovate; basal sternite haired. Fore tibia without a median bristle; mid-tibia with two or three posterior bristles; hind femur with bristles on apical half of antero-ventral surface; hind tibia with one or two antero-dorsal and antero-ventral bristles. Costal thorn absent.

Female.—Similar to the male, the frons about one-third of the head-width; prealar bristle minute.

Length 7 mm.

Type, male, allotype, and ten paratypes, Burnett River, Queensland, 1915, reared from maggots in persimmons (*T. L. Bancroft*).

This species is not so pronouncedly blue as the preceding three species, but is very closely related to them. It also appears to be related to *nigrescens*, Stein, and *tibiella*, Stein, though it is impossible to say definitely without seeing these species. From the former it differs in having the wing without costal thorn and the arista much longer-haired; *tibella* is Indian and has the tibiæ yellow; *nigrescens* was described from Australia, but is unknown to me.

Helina iridescens, sp. n.

Male.—An aberrant species with very distinctive coloration. Shining black, with dense whitish pruinescence. Frons velvety black, orbits, face, and cheeks with white pruinescence; antennæ and palpi black. Thorax with three broad black vittæ, which are distinctly shining, the median one slightly subdivided centrally. Abdomen shining; as the specimen is turned round, the white colour is replaced by black, and *vice versa* in the checkerings; the whole surface brassy except apices of the tergites, which are violaceous. Legs black. Wings hyaline, a faint cloud in subcostal cell, a large brown spot on inner cross-vein, and one on each extremity of the outer cross-vein. Calyptre white, margins yellow. Halteres black.

Eyes almost bare, separated by about one-fourth of the head-width; orbits distinct, narrower than frontalia, with long bristles and fine hairs on their entire length; face concave in profile; antennæ reaching almost to mouth, the third segment broad; arista plumose. Thorax with three pairs of postsutural dorso-centrals, no presutural acrostichals, a very short prealar, and the sternopleurals 1:2. Abdomen narrowly ovate. Fore tibia unarmed at middle; mid-tibia

with two posterior bristles; hind femur with bristles on apical half of antero-ventral surface; hind tibia with two antero-ventral and two antero-dorsal bristles. Outer cross-vein curved; first posterior cell not narrowed apically.

Length 5.5 mm.

Type, Mangalore, Tasmania, 28. viii. 1911 (*A. White*).

Helina antarctica, Bigot.

A species very similar to *micans*, sp. n., in habitus.

Represented by one male and two females from Mangalore, and one male from Hobart, Tasmania, October and November (*A. White*).

Helina pæciliventris, sp. n.

This and the next two species are very closely related and resemble the group to which the European species *duplicata*, Meigen, belongs, but the eyes are hairy and there is no bristle near base of hind tibia on the postero-dorsal surface.

Male and female.—Black, shining, with dense greyish pruinescence. Thorax with four blackish vittæ. Abdomen with paired dorsal spots. Legs black. Wings slightly yellowish, inner cross-vein broadly, outer narrowly infuscated. Calyptræ yellow. Halteres dull yellow.

Male.—Eyes hairy; narrowest part of frons about as wide as third antennal segment; orbits setulose to middle; arista pubescent. Thorax without presutural acrostichals, the prealar small; postsutural dorso-centrals 4; sterno-pleurals 2:2. Abdomen elongate-ovate. Fore tibia with a median posterior bristle; mid-tibia with about six bristles, and some short hairs in an irregular series on posterior surface; hind femur with six or seven long bristles on apical half of antero-ventral surface; hind tibia with two antero-dorsal bristles, a series of long bristles on whole length of antero-ventral surface, and another on posterior surface. Outer cross-vein curved.

Female.—Differs in having the frons about one-fourth of the head-width at vertex, widened anteriorly; the hind tibia with two antero-dorsal and three antero-ventral bristles, and the outer cross-vein more broadly clouded.

Length 8 mm.

Type, male, Bagdad, Tasmania, 14. xii. 1912; allotype, and one female paratype, Brighton, Tasmania, 26. vii. 1913 (*A. White*).

Helina addita, Walker.

A widely distributed species in Australia, which is represented by specimens from Mangalore and Brighton, Tasmania (*A. White*), Burpengary, Queensland (*T. L. Bancroft*), and Victoria (*C. French*).

Helina piliventris, sp. n.

Male.—A larger species than the foregoing, with the wings slightly brownish and the spots on dorsum of abdomen less distinct. General colour and habitus as in *paciliventris*.

Structurally similar to both the foregoing species, distinguishable as indicated in the key.

Length 8 mm.

Type, Mangalore, Tasmania, 1. iii. 1913 (*A. White*).

Helina trinubilifera, sp. n.

Female.—Black, shining, with dense brownish-grey pruinescence. Head black; frons opaque, orbits, face, and cheeks with whitish pruinescence. Thorax with four broad black vittæ, the submedian pair subcontiguous. Abdomen with a pair of large, irregularly-margined, black marks on dorsum of segments 2 and 3, which cover almost the entire disc, the other tergites irregularly marked with black also. Legs tawny, tarsi brown. Wings clear, both cross-veins and a round spot about middle of first posterior cell close to third vein dark brown. Calyptre whitish, margins brown. Halteres yellow, knobs brown.

Eyes subnude; frons about one-third of the head-width, orbital bristles not very long; longest hairs on arista distinctly shorter than width of third antennal segment. Postsutural dorso-centrals 3; prealar very short. Fore tibia with a median posterior bristle; mid-tibia with three posterior bristles; hind femur with one preapical antero-ventral bristle; hind tibia with two antero-dorsal and three antero-ventral bristles; outer cross-vein almost straight.

Length 5 mm.

Type, Mt. Wellington, Tasmania, 3. x. 1912 (*A. White*); paratype, Victoria (*C. French*).

Helina victoria, sp. n.

Female.—Belongs to the same group as *addita*, Walker. Differs as stated in key. In colour more brownish, the cross-

veins of wings very broadly clouded, and the femora and tarsi tawny.

Eyes hairy; arista pubescent; frons normal. Prealar short; postsutural dorso-centrals 3; presutural acrostichals absent. Fore tibia with a median posterior bristle; mid-tibia with three posterior bristles; hind femur with a strong preapical antero-ventral bristle; hind tibia with two antero-dorsal and three antero-ventral bristles.

Length 6-7 mm.

Type, Victoria, 12. xii. 1914 (*A. White*); paratype, Victoria (*C. French*).

Helina micans, sp. n.

Male.—Similar in general habitus to *antarctica*, Bigot, which it very closely resembles. The colour of thorax and abdomen more brassy than in that species, and the abdominal checkering more iridescent. The antennæ and palpi are fuscous. Legs tawny, tarsi fuscous. Wings slightly yellowish, veins yellow basally.

Eyes hairy; narrowest part of frons at least as wide as third antennal segment (in *antarctica* the interfrontalia is obliterated above and the narrowest part of frons is much narrower than third antennal segment); arista plumose. Prealar very short; postsutural dorso-centrals 3; abdomen ovate. Fore tibia unarmed at middle; mid-tibia with three posterior bristles; hind femur with a complete series of antero-ventral bristles, and a series of setulæ on postero-ventral surface; hind tibia with two or three antero-dorsal and two antero-ventral bristles.

Length 10 mm.

Type, Mangalore, Tasmania, 24. xii. 1911 (*A. White*).

Helina spilariformis, sp. n.

Female.—A robust species like the preceding, and in many respects resembling the genus *Spilaria*, especially in having some fine hairs on the hypopleura below the spiracle. Black, densely grey-pruinose, the thorax with four black vittæ and the abdomen with blackish checkerings. Legs tawny, tarsi fuscous. Wings hyaline. Calyptreæ yellowish. Halteres yellow.

Eyes sparsely hairy; frons normal; arista plumose. Thorax with a short weak pair of presutural acrostichals, three pairs of postsutural dorso-centrals, and a short prealar; sterno-pleurals 1:2; scutellum bare on sides and below. Fore tibia with a median posterior bristle; mid-tibia with

two posterior bristles; antero-ventral surface of hind femur with an almost complete series of bristles; hind tibia usually with two antero-dorsal and two antero-ventral bristles.

Length 8 mm.

Type, Mangalore, Tasmania, 19. iv. 1913 (*A. White*); paratype, East Australia (*T. P. Lucas*).

Helina achæta, sp. n.

Female.—General colour as in the preceding species, but the wings more yellowish at base.

Eyes subnude; frons normal; longest hairs on arista at least as long as width of third antennal segment. Thorax with three pairs of postsutural dorso-centrals, a short but distinct prealar, and no presutural acrostichals. Fore tibia without a median posterior bristle; mid-tibia with two posterior bristles; hind femur with two preapical antero-ventral bristles; hind tibia with two antero-dorsal and one antero-ventral bristle.

Length 7 mm.

Type, Mangalore, Tasmania, 16. iii. 1913 (*A. White*).

Helina æneiventris, sp. n.

Male and female.—Black, shining, with dense yellowish-grey pruinescence. The thorax is quadrivittate and slightly metallic-coloured, either cupreous or violaceous, and the abdomen is checkered, the colour varying from greenish to cupreous or violaceous.

General habitus as in *antarctica*, Bigot, but the eyes are as widely separated as in *micans*, from which it differs in chaetotaxy as stated in the key. The frons of the female is normal in width.

Length 9–10 mm.

Type, male, Mangalore, Tasmania, 15. ii. 1913; allotype, topotypical, 1908; one male paratype, topotypical, 1. xii. 1912; one female paratype, topotypical, 21. xi. 1912 (*A. White*).

XIII.—*On Bandicoots allied to Perameles bougainvillei.*

By OLDFIELD THOMAS.

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IN the 'Catalogue of Marsupials'*, in the absence of Shark's Bay specimens representing true *Perameles bougainvillei*, and more or less following Gould's determinations, I assigned

* P. 246 (1888).